SPLENDA USE IN HOMEMADEJAMS AND JELLIES

Consumers are anxious to use this new no-calorie sweetener made from sugar. Currently the information available for making homemade jams and jellies is being experimented with and studied at the University of Wisconsin and the University of Georgia, National Center for Home Canning. The direction inserts in commercial pectin do not list specific directions for using Splenda. The results vary based on the fruit or juice used and whether it is uncooked or cooked jam or jelly.

Current information from the two universities is as follows:

- Refrigerator-freezer jams work well using Splenda
- Use the no-sugar added pectin for refrigerator-freezer and cooked jams & jellies
- Use 1 to 1 1/2 cups of Splenda per recipe (large amounts unnecessary and cause a bitter taste)
- Visit the Calorie Control Council's web site http://www.caloriecontrol.org/lowcal.html which looks at several different artificial sweeteners.
- For cooked jams and jellies add the Splenda between the first and second boiling-refer to pectin insert directions for details
- No-sugar added pectin used in the experiments are the Ball and Mrs Wages brands
- Non-nutritive sweeteners, such as Splenda and other add flavor, not used to gel

Additional information from Dr. Elizabeth Andress (Univ of Georgia, National Center for Home Food Preservation and Dr. Barbara Ingham, Associate Professor, Extension Specialist
Food Science, University of Wisconsin.

We have been trying some jam and jelly recipes with Splenda® as the no-calorie sweetener instead of sugar. There is no easy answer to having success at this time!

Remember that jams and jellies made as pectin gels require certain amounts of sugar and acid to gel. This is true of:
(1) jellies and jams made the long-boil way with no added pectin (they rely on the natural pectin content of the fruit or juice);
(2) those made with added, purchased "regular" liquid or powdered pectins, that call for specific amounts of sugar.

To get a pectin jam or jelly without a required amount of sugar, a modified (low-methoxyl), "no-sugar-needed" pectin must be purchased and used. These pectins require divalent ions such as calcium or magnesium to gel. The needed ions are usually added to the pectin as purchased; in at least one case, however, the calcium powder is in a separate packet in the box and added in an additional step by the user. Sometimes pectin mixtures to create no sugar fruit spreads have "gums" (eg, locust bean gum and/or xanthan gum which are long-chain polysaccarides) added to them to assist in making a thickened fruit spread.

When any of these types of no-sugar-needed pectins are used, non-nutritive sweeteners or some sugar may be added simply for flavor. The sugar in this instance is not needed for the gel. The package inserts explain when to add the

particular sweetener of choice for flavoring and suggest amounts to use. To my knowledge, no inserts yet contain recommendations for Splenda®.

Recipes are also available for making refrigerator-only jellies from juice, unflavored gelatin, and liquid non-nutritive sweetener (which is liquid saccharin).

Status of other testing:

We have tried red plums, fresh peaches, fresh strawberries, and frozen whole strawberries in jams with Mrs. Wages Lite Home Jell® and Ball Fruit Jell® No Sugar Needed Pectin. So far we have a lot of inconsistent findings and are still experimenting. Our methods follow the same methods for adding Splenda® as suggested in these packages for sugar; that is, it is added between the two different boiling steps in the procedures. (If you can't understand this, the only choice is to buy a box and read the insert because there are too many steps and options to follow to put it all in this message.)

Summary to date:

a. These two pectins (Ball and Mrs Wages) result in different types of fruit spreads, in terms of texture, flavor, color and trapped air from the fruit.

b. One consistency is that so far we believe 1-1/2 cups of Splenda® Granular is the right amount to try for recipe quantities given on the package inserts of both brands for these fruits. When made as the package inserts describe for each fruit, the Mrs. Wages Lite Home Jell® spread sometimes seems more tart than the Ball Fruit Jell® version, but any more Splenda seems to lead to an undesirable aftertaste. So, if people want to experiment on their own, we suggest trying 1-1/2 cups of Splenda per recipe; the inserts suggest up to 3 cups of sugar when sugar is used.

c. The Mrs. Wages versions are usually thicker, even too stiff in some cases, so we probably need to look at other recipe adjustments for some of the fruits.

d. We often get a lower yield than the package inserts suggest.

e. We are still working on the peach and strawberry versions. Trapped air and even a foam layer in the head space have been big concerns, as well as sometimes color, texture, flavor and overall appearance. At this point, I'm not suggesting this is related to the use of Splenda®, but it is of concern in telling people they can get desirable or acceptable fruit spreads with these products.

f. We have no storage or shelf life information at this point. We are processing as with all recommendations for jams and jellies for room temperature storage in sealed jars (10 minutes in a boiling water canner). We do not know yet how the flavor, sweetness or color will hold up over time yet. Of course, they must be refrigerated once opened.

Recommendations for Red Plums:

a. With Ball Fruit Jell® No Sugar Needed Pectin, we suggest using 1-1/2 cups Splenda and adding it when the directions tell you to add sugar. Our yield was 4.5 pint jars instead of the suggested 6.

b. With Mrs. Wages Lite Home Jell®, we suggest using the option for 5 cups of prepared fruit, and using 1-1/2 cups Splenda, adding it when the directions tell you to add sugar. Our yield was 3 jars instead of the suggested 5-6. This one in particular is more like a "spreadable fruit" than traditional jam.

That's all we have from our experiences so far.

Additional Information from http://www.splenda.com:

MAKING JELLIES AND JAMS WITH SPLENDA

Jams and jellies made with SPLENDA® Granular must use low methoxyl pectin with calcium added. Regular pectin and even some no-sugar needed pectin will not gel with SPLENDA® Granular. The SPLENDA® test kitchen has made successful batches of jam and jelly using Pomona's Universal Pectin and Mrs. Wages Lite Home Jell. Both of these brands have added monocalcium phosphate, which allows the pectin to set without sugar. Read the ingredient list on the side of the pectin box to find out if your brand has added monocalcium phosphate. Always check with pectin manufacturer's instructions before making jams or jellies.

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